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Mr. Christian Christensen
Bluestone Development
701 S. 15th Street, Studio 100
Omaha, Nebraska 68102

Subject:
Pre-development Investigation Requirements
at UPRR OU3 - Union Pacific Railroad – Omaha Shops
Omaha, Nebraska

ENVIRONMENT

Date:
21 September 2008

Contact:
John Shonfelt

Phone:
913.492.0900

Email:
john.shonfelt@arcadis-us.com

Our ref:
KC001557.0001

Dear Mr. Christensen:

We have recently received correspondence from URS, including a Planning Memorandum and a Phase I Site Preparation Certification, for your proposed development of the remaining lots between Cuming and Webster Streets and 13th and 14th Streets in Omaha, Nebraska (i.e., the Bluestone site). We also understand you have spoken with representatives of Union Pacific Railroad (UPRR) about Bluestone installing a vapor intrusion mitigation system in the proposed buildings at the site. To assist you in your planning, we are transmitting a copy of the Corrective Measures Implementation (CMI) Work Plan for Operable Unit 3 (OU3) for the Omaha Shops, 9th and Webster Streets, Omaha, Nebraska. The CMI Work Plan contains the requirements for investigating the potential for groundwater exposure during construction and vapor intrusion mitigation requirement for new development at the Omaha Shops. Although your proposed Bluestone development project is physically located in Operable Unit 1, the groundwater beneath your proposed development is included in OU3, so any new development would be required to follow the pre-development investigations and corrective measures implementation requirements contained in the CMI Work Plan for OU3.

Please note that the CMI Work Plan is currently under review and has not yet been formally approved by the United States Environmental Protection Agency (USEPA). However, the USEPA has required compliance with the associated Corrective Measures Decision Document for the entire OU3 area. Your review and understanding of the proposed requirements contained in the CMI Work Plan will be beneficial as the Bluestone project moves forward.

After you have had a chance to review the OU3 CMI Work Plan, feel free to call us to discuss the CMI requirements.

The essence of complying with the CMI Work Plan involves completing a pre-development groundwater and soil gas investigation and the construction of a vapor instrusion mitigation system in new buildings. Methodology for conducting a pre-

development investigation for future development has been proposed in the Corrective Measures Implementation (CMI) Work Plan for OU3. This letter outlines a sampling program which will be conducted at the Bluestone site by UPRR to comply with the CMI Work Plan.

Location and Number of Samples

The CMI Work Plan requires that groundwater and soil vapor samples be collected from any parcel of land proposed for redevelopment. The purpose of this pre-development sampling is to determine whether any constituents of concern (COCs) will be encountered in the groundwater during construction, which will determine the necessity for special considerations for worker exposure during construction, and to gather data to determine the level of vapor intrusion mitigation measures that will be required for any new buildings.

The CMI Work Plan requires that a minimum of two groundwater and three soil gas samples be collected for each proposed development at OU3. Sample locations and depths will be determined using the following criteria:

- Groundwater
  - At least two (2) locations will be sampled for groundwater beneath each building footprint. Non-occupied areas (such as parking areas and exterior landscaping) do not require sampling.
  - Sample locations will be distributed throughout each proposed development footprint to gather representative data.
  - Samples will be collected using direct push methods from a depth of at least 5 feet (ft) below the depth at which groundwater is encountered.
  - Groundwater samples will be analyzed for VOCs (by USEPA Method 8260), barium (Method 200.7), and chromium (Method 200.7).

- Soil Gas
  - At least three (3) locations will be sampled for soil gas beneath each building footprint. Non-occupied areas (such as parking areas and exterior landscaping) do not require sampling.
  - Sample locations will be distributed throughout each proposed development footprint to gather representative data.

- Soil gas samples will be collected using SUMMA™ canisters from the mid-point of the unsaturated zone (i.e., half-way between ground surface and the top of groundwater from the depth at which groundwater is encountered).
- Soil gas samples will be analyzed for VOCs using USEPA Method TO-15.

Samples will be collected in accordance with the methods contained in Attachment 1 to this letter, which is reproduced from the OU3 Sampling and Analysis Plan[1].

Data Analysis

The laboratory analytical results from the groundwater and soil gas samples will be compared to cleanup goals established for non-residential exposure for OU3. The pre-development data will be compared to three sets of criteria (contained in the OU3 CMI Work Plan):

1. Subsurface construction exposure scenario groundwater cleanup level (see 2nd column of Table 3-1 in the CMI Work Plan);
2. Restricted Residential exposure scenario, vapor intrusion pathway groundwater cleanup levels (3rd column of Table 3-1 in the CMI Work Plan);
3. Restricted Residential use vapor intrusion mitigation target levels (Table 3-3 in the CMI Work Plan).

If the results of the pre-development groundwater sampling indicate that all analyzed COCs are below the corresponding subsurface construction groundwater cleanup levels found in Table 3-1 of the OU3 CMI Work Plan, then construction activities can proceed without implementing additional engineering and health and safety controls for the construction worker. If any groundwater sample exceeds the subsurface construction cleanup level, then corrective measures, such as engineering controls to prevent construction workers from contacting the impacted groundwater, must be implemented. In addition, the subsurface construction must comply with applicable State and Federal standards, including OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) 1910.120, OSHA Hazard Communication

[1] ARCADIS, 2008. Site-Wide Sampling and Analysis Plan for Corrective Measures Implementation. Operable Units OU2 and OU3, Union Pacific Railroad, 9th and Webster Streets. Omaha, Nebraska. ARCADIS. Lenexa, Kansas. April.

1910.1200, and USEPA Superfund Amendments and Reauthorization Act (SARA) Title III, Emergency Planning and Community Right to Know.

The groundwater results will also be compared to the groundwater to soil vapor intrusion clean up levels in the 3rd column of Table 3-1 in the CMI Work Plan. The soil gas results will be compared to Table 3-3 to determine the level of vapor intrusion mitigation that will be required for new building construction. At a minimum, all new buildings will be constructed with a passive vapor intrusion mitigation system and must have the ability to upgrade to active vapor intrusion mitigation system if future monitoring shows that vapor target levels are exceeded. However, it is strongly recommended that enclosed buildings associated with Bluestone Development project be constructed with an active vapor intrusion mitigation system to avoid any potential system modifications in the future. Additionally, all newly constructed buildings must include sampling ports on the vapor mitigation systems to easily collect the vapor samples that are required as part of the long-term vapor intrusion monitoring program.

Reporting

The results of the pre-development sampling shall be tabulated and compared to the appropriate cleanup levels contained in the OU3 CMI Work Plan. A brief letter report shall be transmitted to the USEPA describing the results of the sampling program. The letter report shall contain:

- A figure showing the groundwater and soil gas soil sampling locations, and proposed development footprint;
- A table of the pre-development sampling results; and
- Recommendations for additional pre-development sampling (if any);

Schedule

The collection and reporting of the pre-development samples should occur before any intrusive work is performed at the proposed development location. UPRR is prepared to collect the data within two weeks of being granted property access by Bluestone Development. Bluestone will be provided the results of the pre-development investigation within three weeks of receiving the analytical data.

Please contact John Shonfelt of ARCADIS at (913) 492-0900 or Jeff McDermott of UPRR at (402) 544-3675 if you have any questions regarding the enclosed information.

Sincerely,

ARCADIS

Bretton C. Overholtzer
Senior Engineer

John P. Shonfelt
Senior Project Manager

Copies:
Ken Herstowski (USEPA, letter only)
Jeff McDermott (UPRR, letter only)
Bill Gidley (NDEQ, letter only)
Bob Stubbe (City of Omaha Public Works, letter only)
Jeff Smith (URS, letter only)

Copies:
Copy of OU3 CMI Work Plan
Attachment 1 – Summary of Analytical Methods from Site-Wide Sampling and Analysis Plan